

Amendments to the Claims

Complete Listing of the Claims

1. (Currently amended) A method of classifying epithelial cancer cells in a sample of blood from a patient with cancer or a patient suspected of having cancer, said method comprising: isolating circulating epithelial cancer cells from said sample, and classifying said isolated cancer cells as terminal cells or proliferative cells by cytological and morphological analyses using fluorescence microscopy.
2. (Currently amended) The method of claim 1, wherein at least one cancer cell is a terminal cell that is a fragile, large cancer cell compared to a white blood cell from the patient, and with a ~~large nucleus~~ high nucleus to cytoplasm ratio when compared to a white blood cell from the patient.
3. (Previously presented) The method of claim 2, wherein said terminal cell is about 20 micrometers to about 50 micrometers in diameter.
4. (Currently amended) The method of claim 1, wherein at least one cancer cell is a terminal cell that is a fragile, large cancer cell compared to a white blood cell from the patient, and is without a nucleus.
5. (Previously presented) The method of claim 4, wherein said terminal cell is about 20 micrometers to about 40 micrometers in diameter.

6. (Previously presented) The method of claim 1, wherein at least one cancer cell is a terminal cell with a nucleus.

7. (Original) The method of claim 6, wherein said terminal cell is a late-stage dying cell and is breaking into pieces.

8. (Previously presented) The method of claim 1, wherein at least one cancer cell is a proliferative cell.

9. (Previously presented) The method of claim 8, wherein said cancer cell is about 25-35 micrometers in diameter.

10. (Currently amended) The method of claim 8, wherein said cancer cell is a ~~small~~ proliferative cell that is a dividing cell.

11. (Currently amended) The method of claim 1, wherein ~~at least three~~ to 100 of said isolated cancer cells are in the form of a microtumor.

Claims 12-18 (Canceled)

19. (Currently amended) A method of determining the presence or absence of epithelial cancer cells capable of causing metastatic cancer, said method comprising:

- (a) isolating circulating epithelial cancer cells in a sample of blood from a patient with cancer or a patient suspected of having cancer; and
- (b) classifying said isolated cancer cells as terminal cells or proliferative cells by cytological and morphological analyses using fluorescence microscopy, thereby determining the presence or absence of cancer cells capable of causing metastatic cancer.

20. (Canceled)

21. (Currently amended) A method of determining the efficacy of a medical procedure for treatment of cancer in a patient, said method comprising:

- (a) conducting a first isolation of circulating epithelial cancer cells in a sample of blood from the patient;
- (b) classifying said isolated cancer cells as terminal cells or proliferative cells by cytological and morphological analyses using fluorescence microscopy;
- (c) conducting a second isolation of circulating epithelial cancer cells in a sample of blood from the patient;
- (d) repeating (b) on said second isolated cancer cells; and
- (e) comparing the number ~~or classes~~ of said first isolated cancer cells to the number ~~or classes~~ of said second isolated cancer cells, or comparing the classes of said first isolated cancer cells to the classes of said second isolated cancer cells, wherein the first isolation is conducted before the administration of the medical procedure and the

second isolation is conducted after the administration of the medical procedure, thereby determining the efficacy of said medical procedure.

22. (Canceled)

23. (Previously presented) The method of claim 21, wherein the presence of more terminal cells in the second isolation than in the first isolation is indicative of a positive response to the medical procedure.

24. (Previously presented) The method of claim 21, wherein the presence of more proliferative cells in the second isolation than in the first isolation is indicative of a negative response to the medical procedure.

25. (Currently amended) The method of claim 21, wherein an increase or no change in the level of circulating cancer cells during or after terminating the medical procedure ~~for a period of time~~ is indicative of a negative response to the medical procedure.

26. (Original) The method of claim 21, wherein said medical procedure is selected from the group consisting of surgery, radiation, hormone therapy, gene therapy, and therapeutic agent(s) administration, and a combination thereof.

27. (Previously presented) The method of any one of claims 1, 19 and 21,
wherein said cancer cells are breast cancer cells.

28. (Previously presented) The method of any one of claims 1, 19 and 21,
wherein said cancer cells are prostate cancer cells.